

**Improving Science Assessment by Pionering Work of School of
International Level Assistanhip Program on Secondary Level:**

How to Measure Student Performance in Science

ARIF HIDAYAT

Indonesia University of Education

CECE SUPARYA

SMPN 1 Cimahi

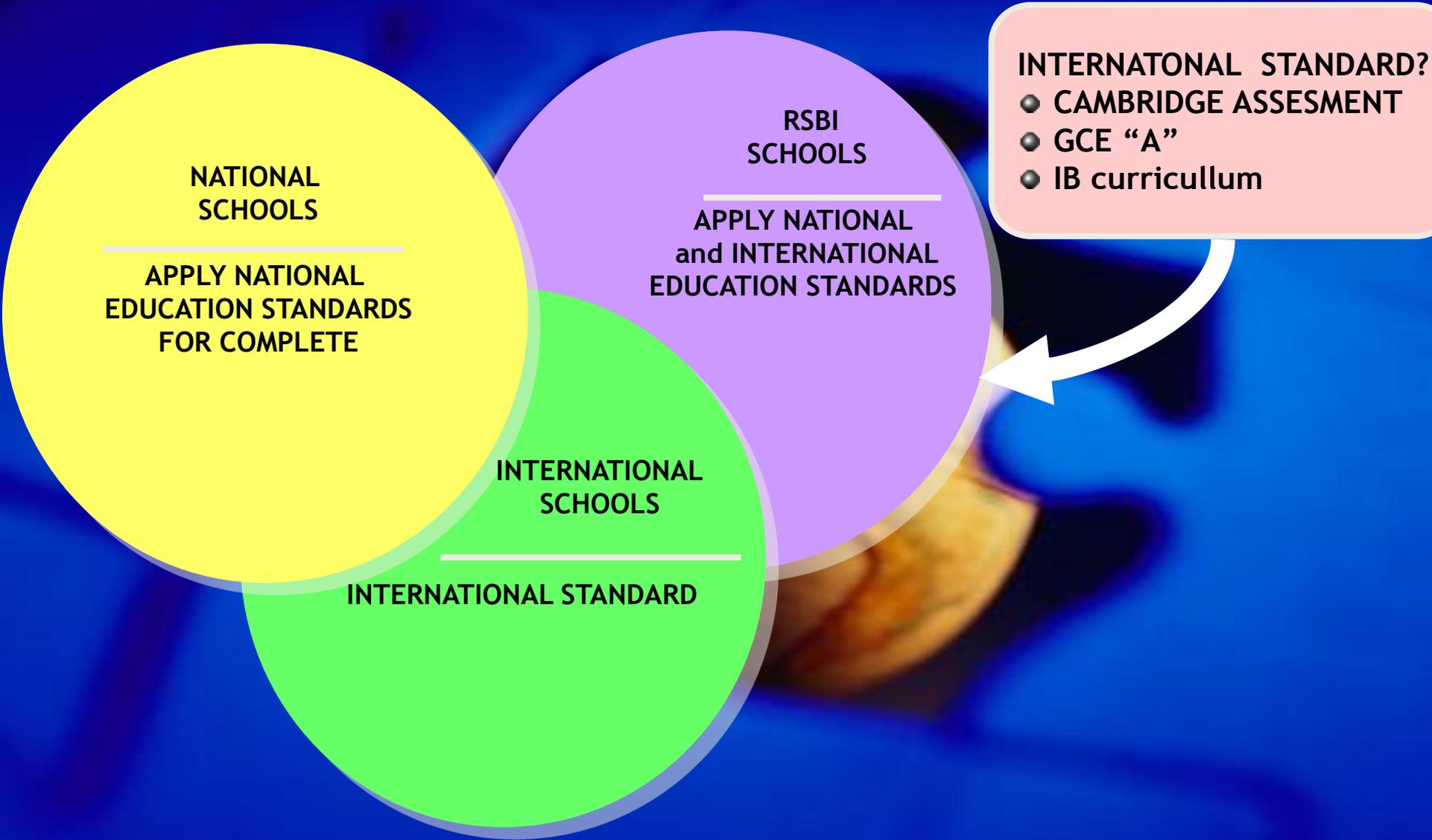
et al

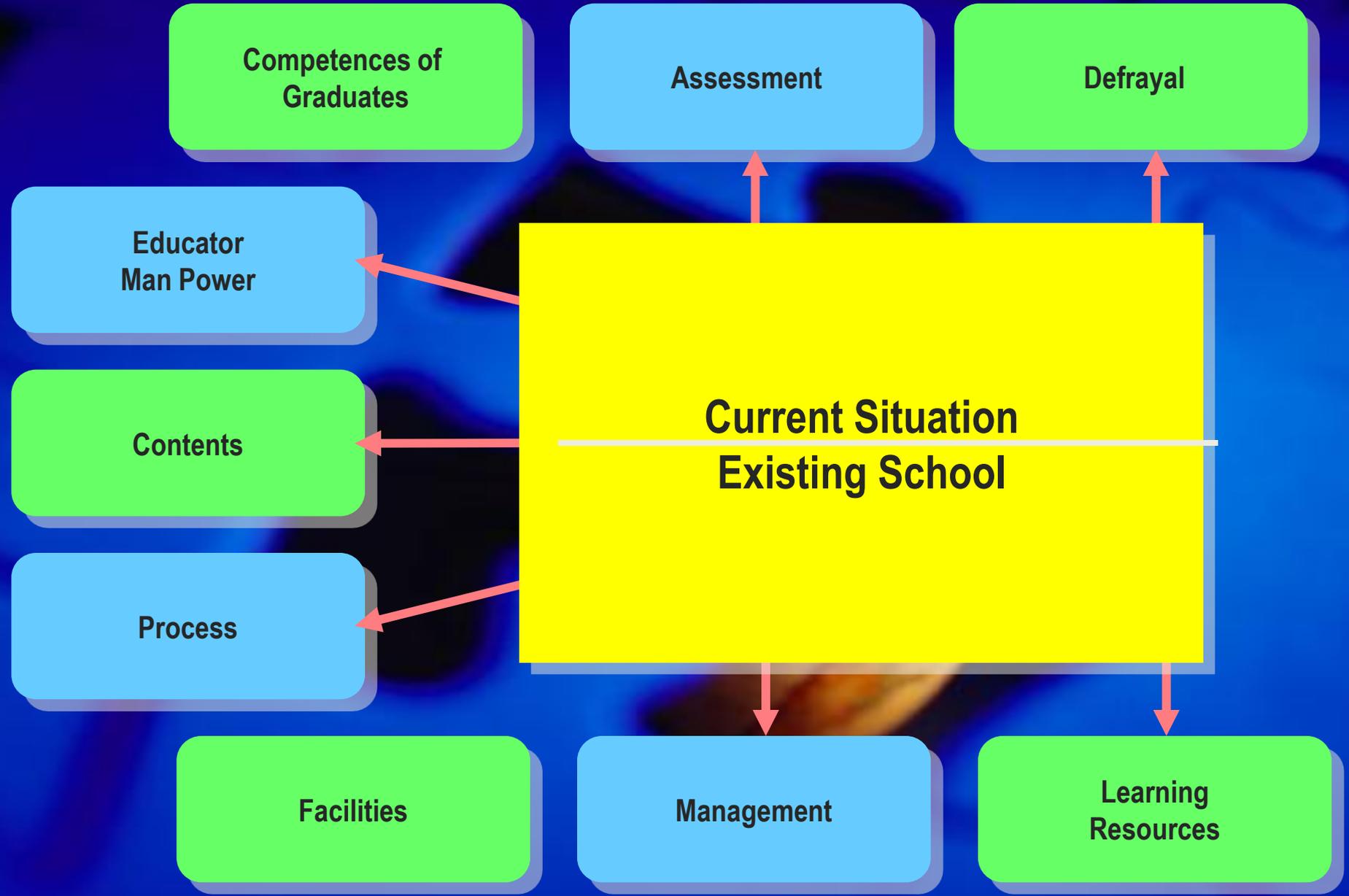
The 2nd International Conference on Mathematics and Natural Sciences

Institut Teknologi Bandung

Bandung, October 28th-30th, 2008

INDONESIA SCHOOL MODEL FOR THE NEXT





Competences of Graduates

Assessment

Defrayal

Educator Man Power

Contents

Process

Current Situation Existing School

Facilities

Management

Learning Resources

Science Assessment

We define *scientific literacy* in terms of an individual's:

- Scientific knowledge and *use* of that knowledge to...
 - ... identify scientific issues,
 - ... explain scientific phenomena, and
 - ... draw evidence-based conclusions about science-related issues
- Understanding of the characteristic features of science as a form of human knowledge and enquiry
- Awareness of how science and technology shape our material, intellectual and cultural environments
- Willingness to engage with science-related issues .

CONTEXT

Life situation that involve science and technology

COMPETENCIES

- identify scientific issues
- Explaining phenomena scientifically
- Use scientific evidence

KNOWLEDGE

- About the natural world (knowledge of science)
- About science it self (knowledge about science)

ATTITUDES

- Responses to science issues
- interest and responsibility
 - support for scientific enquiry

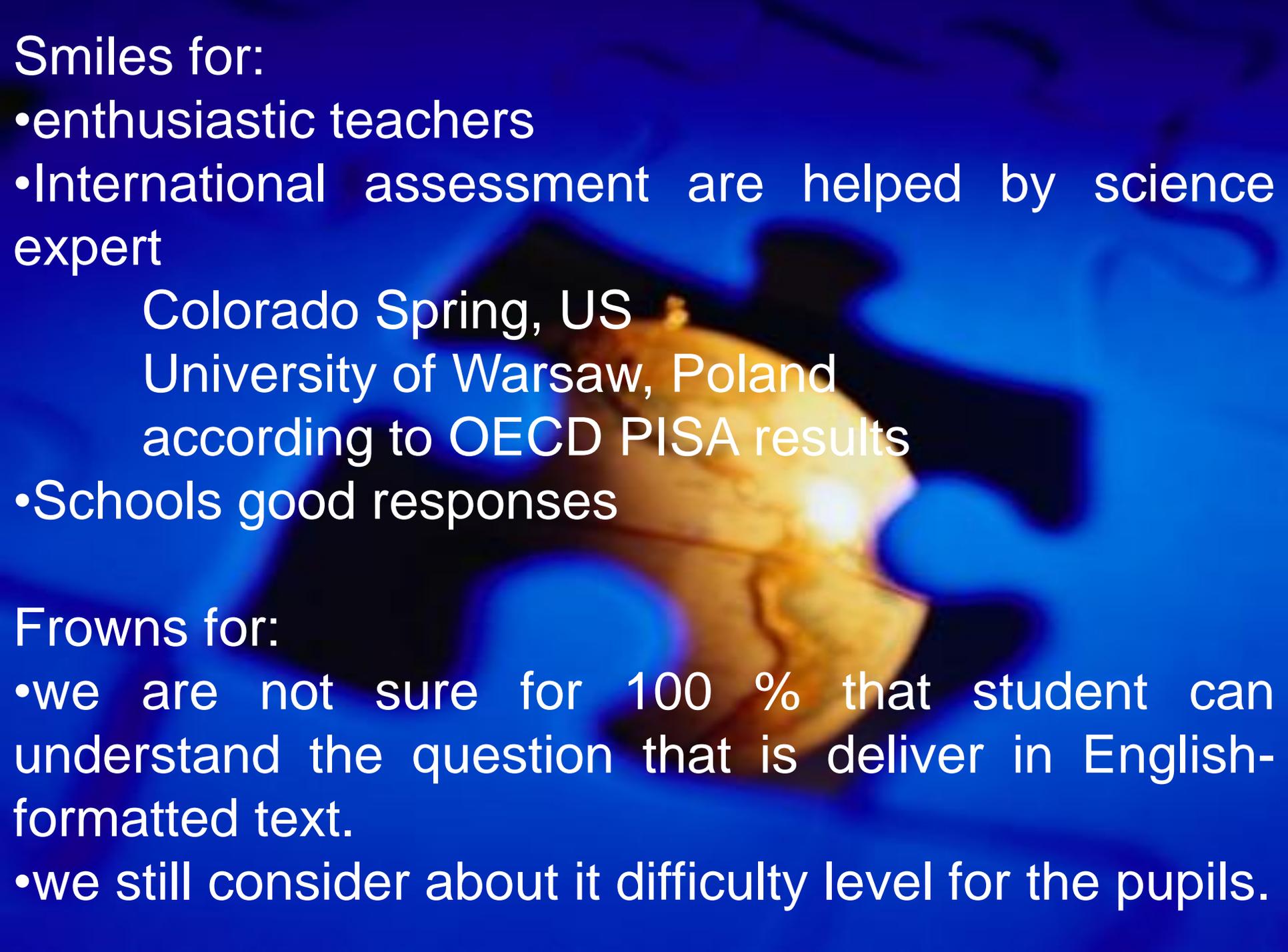
**Student Proficiency
In Science**



**Improve quality
in educational outcomes**



Samples



Smiles for:

- enthusiastic teachers
- International assessment are helped by science expert

Colorado Spring, US

University of Warsaw, Poland

according to OECD PISA results

- Schools good responses

Frowns for:

- we are not sure for 100 % that student can understand the question that is deliver in English-formatted text.
- we still consider about it difficulty level for the pupils.

Conclusion

Science is the major testing domain for the first time in program.

The definition of *science literacy* has its origin in the consideration of what 15-year-old- students should know, value and be able to do as preparedness for life in modern society with central of definition are the competencies that are characteristic of science and scientific enquiry.

The ability of students to perform these competences depends on their scientific knowledge, both knowledge of the natural world and knowledge about science it self, and their attitudes towards science-related issues.

The ratio of items assessing their knowledge about science enable separated scales, with described proficiency levels, to be constructed each of the competencies, or for the two types of knowledge and attitudes that are assessed with embedded items.